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OMNIDIRECTIONALLY ADJUSTABLE WALL LAMP PLUG



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The present invention is a continuation in part of U. S. Patent Application No. 09/852,640 which is assigned to the inventor of the present invention, and thus the content of U. S. Patent Application No. 09/852,640 is incorporated into the present invention as a part of the specification.

BACKGROUND OF THE INVENTION

1) FIELD OF THE INVENTION

The present invention relates to lamp plugs, and particularly to an omnidirectionally adjustable wall lamp plug capable of rotating through 360-degrees for adjustment.

2) DESCRIPTION OF THE PRIOR ART

Referring to FIG. 1, a conventional wall lamp comprises a wall lamp body 10 and a plug base 101, which are formed integrally by mold injection. The wall lamp and the pins 102 arranged at a fixed orientation such that the wall lamp can only be plugged into a receptacle vertically or horizontally. Thereby, the orientation is not adjustable, otherwise the objects at two sides thereof will be shielded. To solve this problem, numerous patents about adjustable angle wall lamp plug structures are disclosed, such as U.S. Patent Nos. 6,093,028; 5,711,674; 5,352,122; 5,954,519; and 5,683,254. Although these prior art structures are capable of adjusting the orientation, the structures are too complex to be assembled easily, resulting in the shortcomings of production cost and high malfunction rates.

SUMMARY OF THE INVENTION

Accordingly, the primary object of the present invention is to provide an omnidirectionally adjustable wall lamp plug. A conductor
5 element has a vertical surface at the lateral side thereof. The conductor element is formed by bending from a body of the conductor element. A contact element has a vertical side at the lateral side thereof. The union end of one pin in the plug base resists against the
10 vertical surface of the conductor element, and a buckling edge along each of the two sides of the union end is inserted into the plug base. A connection washer end is bent from one end of a small pin to resist against the vertical surface of the conductor element. Thereby,
when the wall lamp is rotated through 360 degrees. The electric power is still supplied so as to achieve the object of omnidirectional
15 adjustment.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective view of a conventional wall lamp
plug.

20 Figure 2 is an exploded perspective view of the present invention.

Figure 3 is an assembled perspective view of the present invention.

25 Figure 4-A to 4-H show one embodiment of the present invention, where the orientation of the wall lamp is changed according to the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Referring to FIG. 2 and FIG. 3, the present invention is comprised of a wall lamp body 1 having a light bulb 11 locked at a top thereof, a plug base 2 attached to the lateral end of the body 1, and a screw 3 and a spring 4 which fasten the body 1 to the plug base

5 2.

The body 1 has a start switch (not shown) at the lateral side thereof for turning on or off a power source. A press mount 12 with lead holes 121 protrudes from the other side of the body 1. A shaft 122 projects between the press mount 12 and the lead holes 121. A locating post 123 is disposed at each of the two opposite corners of the press mount 12. A conductor element 124 and a contact element 125 are respectively inserted through the lead holes 121 of the body 1.

The conductor element 124 is formed with a vertical surface 1241 having a through-hole therethrough and is bent from a body of the conductor element. After the conductor element 124 is inserted into the lead hole 121, the vertical surface 1241 passes through the shaft 122 to resist against one side of the press mount 12.

The contact element 125 is formed with a vertical side 1251 having a through-hole therethrough. After the contact element 125 is inserted through the lead hole 121, the vertical side 1251 is adhered to the shaft 122.

The plug base 2 has a fastening hole 21 at its center thereof. A pin hole 22 is formed at each of the two sides of the fastening hole 21, and a large and a small pins 23 and 24 are respectively inserted into the pin holes 22. At the opposing ends where the plug base 2 is fastened to the body 1, a plurality of locating recesses 25 are arranged sequentially. Thereby, when the body 1 is rotated, the

locating posts 123 are sequentially aligned with and are engaged to the locating recesses 25 of the plug base 2. Thus, the present invention can rotate through 360 degrees.

One end of the large pin 23 is an insertion end 231 and the other end thereof has a slight convex shape. This union end 232 resists against the vertical surface 1241 of the conductor element 124. . Each of two sides of the union end 232 has a buckling edge 233. Thus, After the large pin 23 is inserted into one pin hole 22, the buckling edges 233 resists against the rear end of the pin hole 22, thereby enabling electrical connectivity between the body 1 and the plug base 2.

The small pin 24 has an insertion end 241 at one end thereof and a connection washer end 242 at another end thereof. The connection washer end 242 is formed by bending another end so as to resist against the vertical side 1251 of the contact element 125. After the small pin 24 is inserted into the pin hole 22, the connection washer end 242 resists against the inner side of the fastening hole 21.

Referring to FIG. 5-A, FIG. 5-B, FIG. 5-C, FIG. 5-D, FIG. 5-E, FIG. 5-F, FIG. 5-G, and FIG. 5-H, the screw 3 is firstly inserted through the spring 4 and into the fastening hole 21 of the plug base 2 and then installed to the shaft 122 of the body 1 so as to fasten the body 1 and the plug base 2 into a single structure. The plug base 2 and the body 1 are left a clearance therebetween so as not to wholly adhere to the body 1, thereby enabling the body 1 to rotate 360 degrees. Thereby, when the wall lamp is rotated, the union end 232 of the large pin 23 resists against the conductor element 124 of the body 1 and the connection washer end 242 of the small-ended pin 24

resists against the contact element 125 of the body 1. Thereby, the body 1 and the plug base 2 are conductive. The locating posts 123 of the body 1 are sequentially arranged and engaged into the locating recesses 25 of the plug base 2. Therefore, when the plug base 2 is
5 inserted into the plug base on the wall, the body 1 rotates around the shaft 122 and is fixed at one position where locating posts 123 and locating recesses 25 engaged. The wall lamp of the present invention is capable of rotation through 360 degrees for omnidirectional adjustment to any desired angle. The start switch (not shown) is
10 used to turn on or off the power source.